

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 1-3, 5-9 and 11. Claims 1-3, 5-9 and 11 are currently amended. Claims 4 and 10 are cancelled.

The amendment to claim 1 is supported at page 7, second paragraph of the specification.

The amendment to claim 9 is supported in original claim 10.

The remaining amendments are editorial and self-explanatory.

No new matter is added.

Claim Rejections - 35 U.S.C. §102

Claims 1-11 are rejected under 35 U.S.C. §102(b) as being anticipated by JP 2000-226572 (hereinafter referred to as JP'572).

Applicants respectfully traverse this rejection.

1. The Present Invention

The present invention is directed to a nanochannel substance wherein an oxide layer contains a surfactant micelle. The nanochannel substance comprises a nanochannel structure containing a functional molecule. Claim 1 further provides that the functional molecule is contained in the nanochannel and the inner wall of the nanochannel is hydrophobic.

The present invention is also directed to a method for the manufacture of a nanochannel structure containing a functional molecule. The method provides that a nanochannel substance, wherein an oxide layer contains a surfactant micelle, is formed from an acidic aqueous solution of alcohol containing a surfactant, a hydrophobically treating agent, and an alkoxide compound. A functional molecule is then impregnated into the nanochannel substance.

2. Distinctions Between the Present Invention and the Prior Art

The Examiner points out in the Office Action that JP'572 discloses a technique wherein a porous silica having a surfactant micelle as a matrix, supports a functional molecule.

However, JP'572 does not disclose or suggest the inner wall of the nanochannel being subjected to a hydrophobic treatment, and being hydrophobic. Accordingly, all of the features of claims 1 and 9 are not disclosed or suggested by JP'572.

Furthermore, the present invention also demonstrates unexpected results over the prior art. The present inventors have surprisingly discovered that the inner wall of the nanochannel being made hydrophobic improves suppression of elution of the surfactant micelle into water or aqueous solution. This is described on page 7, second paragraph of the specification. The unexpected results are demonstrated by the Examples of the present specification. See e.g., the specification at page 12, last full paragraph, and following.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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